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(54) Title: MICELLE DELIVERY SYSTEM LOADED WITH A PHARMACEUTICAL AGENT

(57) Abstract: The invention is directed to an improved drug delivery system that includes a micelle, comprising polyethylene glycol and a lipid component, and a pharmaceutical agent dispersed in the lipid component. The delivery system may also include a targeting ligand. The micelle delivery system of the invention is capable of stabilizing, *inter alia*, poorly soluble pharmaceutical agents and increasing their delivery efficacy. Appropriate pharmaceutical agents useful in the system of the invention include anti-inflammatory agents, agents for photodynamic therapy, anti-tumor agents, anti-neoplastic agents, anti-metastatic agents, and imaging agents, as well as hydrophobized derivatives thereof. Specifically, the pharmaceutical agent can be porphyrin, chlorine-6-trimethyl ester, tamoxifen, paclitaxel, 1,3-bis(2-chloroethyl)-1-nitrosourea, camptothecin, ellipticine, rhodamine, dequalinium, diphenylhexatriene, vitamin K3, diethylene triamine pentaacetic acid, or a functional derivative thereof. The micelles in the system of the invention have low critical micellar concentration and high kinetic stability, which provides great advantages in biodistribution, for example, accumulation at the site of a tumor.



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